Numbers) of the standard term. — ascertaining thus the variation of each price from *its own* starting-point in the original series, and then deducing the average general change by taking the arithmetical mean. In Tables I and II the aggregate result is determined by the fortuitous fact that one or more articles have a unit of measurement which is relatively large or small, while on the plan of Index Numbers each article in the standard period is placed at a common level, and the corresponding article in any year under consideration is related to it as a percentage. It is obvious that whether we reduce the whole of the articles in Tables I and II to a common denomination of both value and quantity, or retain them at the recognised modes in which they are expressed by the customs of commerce, the result of the scheme of Index Numbers remains unaltered. Take, for example, Coal, to which is assigned the Index Number of 100 for the standard period ; its Index Number (or percentage) in the year examined is thus expressed — (Table I) 264d. per ton: 271-33d. per ton : : 100 : *x,* whence a? = 102-8, which is the Index Number of Coal for the year considered, and showing thus an advance of $2^{4}8$ per cent. [Index Numbers, as I have remarked, are regarded as integers, and the usual course is pursued of turning -5 and upwards into 1, and cancelling decimals under -5.] From Table II the proportion 271*33 becomes (where the ton is converted into lbs.) $\frac{264}{x}$ = .....

: 100 :#, where the one 2,240 cancels the other, and the same result of 102-8 is produced. The same mode of calculation, as I have stated, is adopted in respect of each commodity in the list, and the average aggregate price of the mass of commodities is the arithmetic mean of the sum of the Component Numbers.

In illustration, I extract from Mr. Sauerbeck's statistics the prices of the constituents of animal food — these consist of Prime Beef, Middling Beef, Prime Mutton, Middling Mutton, Pork, Bacon and Butter. Mr, Sauerbeck furnishes the average price of each during the period of 1867-77, and then the several prices which prevailed during (let

us assume) the year 1907. Deducing from these data, as already explained, the Index Number of each article in 1907, we obtain, in the preceding